



2018 Red and White Clover Report

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Introduction

Red clover (*Trifolium pratense* L.) is a high-quality, short-lived, perennial legume used in mixed or pure stands for pasture, hay, silage, green chop, soil improvement, and wildlife habitat. This species is adapted to a wide range of climatic and soil conditions. Stands of improved varieties generally are productive for 2½ to 3 years, with the highest yields occurring in the year following establishment. Red clover is used primarily as a renovation legume for grass pastures and hay fields. It is a dominant forage legume in Kentucky because it is relatively easy to establish and has high forage quality, yield, and animal acceptance.

White clover (*Trifolium repens* L.) is a low-growing, perennial pasture legume with white flowers. It differs from red clover in that the stems (stolons) grow along the surface of the soil and can form adventitious roots that lead to the development of new plants. Three types of white clover grow in Kentucky: Dutch, intermediate, and ladino. Dutch white clover, sometimes called “common,” naturally occurs in many Kentucky pastures and even lawns. It is generally long lived and reseeds readily, but its small leaves and low growth habit result in low forage yield. The intermediate type is a cross between ladino and Dutch white clover and has been developed to give higher yields than the Dutch type and to persist better than the ladino type under frequent or continuous grazing conditions. Ladino white clover has larger leaves and taller growth than the intermediate and Dutch types and is the highest yielding of the three white clover types but requires rotational grazing to maintain stands. Information on the grazing tolerance of white clover varieties can be found in the 2018 Red and White Clover Grazing Tolerance Report (PR-750).

Table 1. Temperature and rainfall at Lexington, Kentucky in 2016, 2017, and 2018.

	2016				2017				2018 ²			
	Temp		Rainfall		Temp		Rainfall		Temp		Rainfall	
	°F	DEP ¹	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	32	+1	0.80	-2.06	40	+9	6.81	+3.95	31	0	2.01	-0.85
FEB	38	+3	6.09	+2.88	47	+12	4.46	+1.25	45	+10	9.77	+6.56
MAR	52	+8	4.07	-0.33	48	+4	3.34	-1.06	42	-2	5.16	+0.76
APR	57	+2	3.97	+0.09	62	+7	4.17	+0.29	50	-5	5.52	+1.64
MAY	64	0	9.17	+4.70	66	+2	7.74	+3.27	73	+9	8.39	+3.92
JUN	76	+4	5.09	+1.43	73	+1	7.68	+4.02	76	+4	6.42	+2.76
JUL	79	+3	7.43	+2.43	76	0	4.49	-0.51	77	+1	6.15	+1.15
AUG	79	+4	4.37	+0.44	74	-1	6.66	+2.73	77	+2	6.45	+2.52
SEP	74	+6	2.18	-1.02	69	+1	4.72	+1.52	74	+6	12.88	+9.68
OCT	64	+7	0.37	-2.20	60	+3	6.06	+3.49	59	+2	6.54	+3.97
NOV	51	+6	1.94	-1.45	47	+2	3.09	-0.30				
DEC	37	+1	9.4	+5.42	35	-1	2.66	-1.32				
Total			54.88	+10.33			61.88	+17.33			69.29	+32.11

¹ DEP is departure from the long-term average.

² 2018 data is for ten months through October.

Table 2. Temperature and rainfall at Princeton, Kentucky in 2016, 2017, and 2018.

	2016				2017				2018 ²			
	Temp		Rainfall		Temp		Rainfall		Temp		Rainfall	
	°F	DEP ¹	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	35	+1	1.37	-2.43	43	+9	3.18	-0.62	32	-2	4.28	+0.48
FEB	40	+2	4.23	-0.20	49	+11	1.78	-2.65	45	+7	9.50	+5.07
MAR	53	+6	7.3	+2.36	50	+3	4.09	-0.85	47	0	9.53	-1.41
APR	59	0	4.41	-0.39	63	+4	4.28	-0.52	53	-6	4.9	+0.10
MAY	64	-3	6.21	+1.25	67	0	4.43	-0.53	74	+7	4.69	-0.27
JUN	77	+2	2.18	-1.67	74	-1	5.39	+1.54	78	+3	7.80	+3.95
JUL	80	+2	12.72	+8.43	78	0	2.23	-2.06	78	0	2.58	-1.71
AUG	78	+2	5.37	+1.36	75	-2	1.39	-2.62	77	0	2.68	-1.33
SEP	73	+2	1.33	-2.00	71	0	3.93	+0.60	74	+4	5.61	+2.28
OCT	65	+6	0.25	-2.80	61	+2	6.65	+3.60	61	+2	2.96	-0.09
NOV	52	+5	2.86	-1.77	50	+2	2.96	-1.67				
DEC	38	-1	6.51	+1.47	37	-2	3.01	-2.03				
Total			54.74	+3.61			43.32	-7.81			48.53	+7.07

¹ DEP is departure from the long-term average.

² 2018 data is for ten months through October.

Yield and persistence of red and white clover varieties are dependent on environment and pressure from diseases and insects. The most common red clover diseases in Kentucky are southern anthracnose, powdery mildew, sclerotinia crown rot, and root rots. For white clover, the most common pests are stolon rots, root rots, and potato leafhoppers. High yield and persistence (as measured by percent stand) are two indications that a specific red or white clover variety is

resistant to or tolerant of these pests when grown in Kentucky.

This report provides current yield and persistence data on red and white clover varieties included in yield trials in Kentucky as well as guidelines for selecting clover varieties. Tables 12 and 13 show a summary of all clover varieties tested in Kentucky for the past 15 years. The UK Forage Extension website at forages.ca.uky.edu contains electronic versions of all forage variety testing reports from

Kentucky and surrounding states and a large number of other forage publications.

Important Selection Considerations

Local adaptation and persistence. The variety should be adapted to Kentucky as indicated by superior performance across years and locations in replicated yield trials such as those reported in this publication. High-yielding varieties are generally also those varieties that are the most persistent. Improved red clover generally produces measurable yields for 2½ to 3 years, with the year of establishment considered as the first year. The highest yields occur in the year following establishment. White clover may persist longer than red clover, particularly in wet seasons, and has the ability to reseed even under grazing.

Seed quality. Buy premium-quality seed that is high in germination and purity and free from weed seed. Buy certified seed or proprietary seed of an improved variety. An improved variety is one that has performed well in independent trials,

such as those reported in this publication. Other information on the label will include the test date (which must be within the previous nine months), the level of germination, and percentage of other crop and weed seed. Order seed well in advance of planting time to assure that it will be available when needed.

Description of the Tests

This report summarizes studies at Lexington (two in 2016, two in 2017, and two in 2018) and Princeton (2015). The soils at Princeton (Crider) and Lexington (Maury) are well-drained silt loams. All are well-suited to clover production. Plots were 5 feet by 20 feet in a randomized complete block design with four replications with a harvested plot area of 5 feet by 15 feet.

Seedings were made at 12 pounds per acre for red clover and 3 pounds per acre for white clover into a prepared seedbed using a disk drill. The first cutting in the seeding year was delayed to allow the clover to completely reach maturity as indicated by full bloom, which generally occurs about 60 to 90 days after seeding.

Otherwise, harvests were taken when the clover was in the bud to early flower stage using a sickle-type forage plot harvester. Fresh weight samples were taken at each harvest to calculate percent dry matter production. All tests for establishment, fertility (P, K, and lime based on regular soil tests), and harvest management were managed according to University of Kentucky Cooperative Extension Service recommendations. Weeds were controlled to avoid limiting production and persistence.

Results and Discussion

Weather data for Lexington and Princeton are presented in Tables 1 and 2.

Yield data (on a dry matter basis) are presented in Tables 3 through 9. Yields are given by cutting date for 2018 and as total annual production. Varieties are listed in order from highest to lowest total production (for the life of the test). Experimental varieties are listed separately at the bottom of the tables and are not available commercially.

Table 3. Dry matter yields and stand persistence of red clover varieties sown April 5, 2016, at Lexington, Kentucky.

Variety	Percent Stand						Yield (tons/acre)					
	2016		2017		2018		2016	2017	2018		3-year Total	
	Jun 14	Sep 27	Mar 27	Sep 29	Mar 20	Jul 13	Total	Total	May 20	Jun 19		Total
Commercial Varieties-Available for Farm Use												
SS0303RCG	93	79	78	75	69	49	2.21	5.30	1.95	0.95	2.90	10.41*
Bearcat	94	64	83	71	66	45	1.63	4.36	1.67	0.78	2.45	8.43
Kenland (certified)	87	60	69	48	43	14	1.70	4.10	1.53	0.90	2.43	8.22
Freedom!	90	58	66	30	26	15	1.39	4.20	1.58	0.69	2.27	7.87
FF 9615	84	69	63	39	35	16	1.32	4.09	1.64	0.60	2.24	7.64
Evolve	48	33	35	25	15	9	1.03	4.01	0.98	0.60	1.58	6.62
Common O	77	28	18	3	3	2	1.05	1.95	0.19	0.19	0.38	3.38
Kenland (uncertified)	53	13	11	3	2	1	0.95	1.64	0.15	0.12	0.27	2.85
Experimental Varieties												
RC0702	81	84	84	81	80	65	1.37	4.79	1.81	0.82	2.63	8.79*
GATP1412	79	60	65	55	40	25	1.59	4.52	1.54	0.79	2.33	8.44
UK2014(2,4-D)	94	80	79	65	58	30	1.70	4.03	1.76	0.78	2.54	8.27
IS-TP12	75	28	33	15	9	6	1.83	3.86	1.18	0.53	1.72	7.23
GA9908	75	40	40	24	18	10	1.73	3.73	0.90	0.57	1.48	6.80
GATP1413	83	45	50	21	15	7	1.14	3.65	0.90	0.82	1.72	6.50
GATP1501	78	29	50	13	13	6	0.85	3.42	0.96	0.51	1.47	5.73
B-16.0003	69	43	40	14	6	5	1.03	3.19	0.56	0.43	0.99	5.21
B-15.3167	83	13	14	3	1	1	1.42	2.01	0.06	0.12	0.18	3.62
Pramedi	84	16	8	3	1	1	1.37	2.20	0.14	0.08	0.22	3.50
Mean	79	47	49	32	28	17	1.40	3.66	1.08	0.57	1.65	6.73
CV,%	13	28	24	34	34	51	31.53	17.12	30.81	32.47	27.67	17.87
LSD,0.05	14	18	16	16	13	12	0.63	0.92	0.47	0.26	0.65	1.77

*Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Statistical analyses were performed on all clover data (including experimental varieties) to determine whether the apparent differences are truly due to variety. Varieties not significantly different from the top variety within a column are marked with one asterisk (*). To determine if two varieties are truly different, compare the difference between the two varieties with the least significant difference (LSD) at the bottom of the column. If the difference is equal to or greater than the LSD, the varieties are truly different when grown under the conditions at a given location. The coefficient of variation (CV), which is a measure of the variability of the data, is included for each column of means. Low variability is desirable, and increased variability within a study results in higher CVs and larger LSDs.

Certified “Kenland” continues to rank near the top of tests. It is important to note yield differences between certified and uncertified Kenland red clover. Most Kenland offered for sale is uncertified and probably common seed falsely advertised as Kenland. Our tests show uncertified Kenland is significantly lower in yield than certified Kenland. White clover varieties, as managed in these trials, yielded less than most red clover varieties but were more persistent. Again, certified seed of improved varieties is recommended.

In addition to the commercially available varieties and experimental lines, selected “common” red clovers are included in the variety tests for comparison. Common red clover, generally sold as “medium red clover variety unknown,” is unimproved red clover with unknown performance. Several years of testing show only about one out of every 10 common red clovers is as productive as certified or proprietary red clovers. In Kentucky, the average yield advantage of seeding improved red clover varieties compared to common types is 3 tons to 6 tons higher of dry matter/acre over the life of the stand.

Table 4. Dry matter yields, seedling vigor and stand persistence of red clover varieties sown September 8, 2017, at Lexington, Kentucky.

Variety	Seedling Vigor ¹ Oct 12, 2017	Percent Stand			Yield (tons/acre)				
		2017		2018	2018				
		Oct 12	Mar 14	Sep 25	May 11	Jun 14	Jul 12	Aug 14	Total
Commercial Varieties-Available for Farm Use									
SS0303RCG	4.1	100	100	99	1.39	1.78	0.85	0.93	4.95*
Freedom!	4.1	95	90	88	1.43	1.70	1.02	0.63	4.78*
Kenland	4.3	100	100	99	1.37	1.71	0.86	0.64	4.57*
FF 9615	4.3	100	100	99	1.16	1.58	0.98	0.82	4.54*
Gallant	3.3	99	99	98	1.37	1.52	0.88	0.74	4.52*
Evolve	2.6	93	95	93	0.97	1.71	0.99	0.78	4.45*
Robust	4.1	100	100	55	1.29	1.59	0.71	0.58	4.17
Common O	5.0	100	100	48	1.27	1.49	0.57	0.78	4.10
Experimental Varieties									
B-16.0003	4.0	100	100	95	1.57	1.95	1.04	0.84	5.41*
GATP1403	3.5	99	99	99	1.32	1.87	0.85	0.90	4.93*
GATP1401	3.9	100	100	98	1.34	1.76	0.92	0.89	4.91*
RC 0702	3.9	100	100	100	1.08	1.66	0.94	0.92	4.59*
RC 0705G	3.9	100	99	99	1.07	1.64	1.11	0.75	4.58*
IS-TP12	3.1	99	100	91	1.38	1.65	0.88	0.61	4.51*
GATPCP	3.5	99	100	99	1.31	1.50	0.79	0.78	4.39*
UK2014(2,4-D)	4.0	100	100	98	1.18	1.60	0.78	0.81	4.38*
B-16.5140	4.4	100	100	95	1.05	1.82	0.85	0.64	4.36*
B-15.3167	4.6	100	100	66	1.16	1.58	0.93	0.69	4.35*
B-16.4532	4.8	100	100	53	1.35	1.53	0.80	0.55	4.22
GA9908	3.4	100	100	94	1.10	1.54	0.84	0.61	4.09
GATP1402	3.8	100	100	97	1.02	1.55	0.82	0.60	3.99
MVS-R02	4.1	100	100	65	0.94	1.28	0.64	0.51	3.36
Mean	3.9	99	99	88	1.23	1.64	0.87	0.73	4.46
CV,%	18.8	2	4	12	29.96	16.42	22.51	30.65	17.72
LSD,0.05	1.0	3	6	14	0.52	0.38	0.28	0.32	1.12

¹ Vigor score based on a scale of 1 to 5 with 5 being the most vigorous growth.

*Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Table 5. Dry matter yields, seedling vigor and stand persistence of red clover varieties sown April 12, 2018, at Lexington, Kentucky.

Variety	Seedling Vigor ¹ May 22, 2018	Percent Stand		Yield (tons/acre)			
		2018		2018			
		May 22	Sep25	Jun 28	Aug 3	Sep 13	Total
Commercial Varieties-Available for Farm Use							
Freedom! MR	4.8	99	100	1.43	1.81	1.00	4.24*
Kenland	4.8	99	100	1.08	1.67	0.93	3.68*
SS0303RCG	4.5	99	100	1.20	1.67	0.70	3.57*
Gallant	4.8	99	99	1.15	1.67	0.64	3.46*
Freedom!	4.5	97	99	1.05	1.70	0.56	3.31
Common O	4.5	99	92	0.70	0.98	0.62	2.30
Experimental Varieties							
PAG-37	4.5	98	99	1.20	1.69	0.73	3.62*
UK2014(2,4-D)	4.5	99	99	1.08	1.57	0.66	3.31
Mean	4.6	99	98	1.11	1.60	0.73	3.44
CV,%	12.5	2	2	24.18	16.67	26.79	15.51
LSD,0.05	0.8	3	3	0.39	0.39	0.29	0.78

¹ Vigor score based on a scale of 1 to 5 with 5 being the most vigorous growth.

*Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Tables 10 and 11 summarize information about proprietors, distributors, and yield performance across years and locations for all varieties currently included in this report. Varieties are listed in alphabetical order, with the experimental varieties at the bottom. Experimental varieties are not available for farm use, but commercial varieties can be purchased from dealerships. In Tables 10 and 11, an

open block indicates the variety was not included in that particular test (labeled at the top of the column), and an “x” in the block means that the variety was included in the test but yielded significantly less than the top-yielding variety in the test. A single asterisk (*) means the variety was not significantly different from the highest-yielding variety based on the 0.05 LSD. Look at data from several years

and locations when choosing a variety of clover rather than results from one test year, as is reported in Tables 3 through 9. Make sure seed of the variety selected is properly labeled and will be available when needed.

Tables 12 and 13 are summaries of yield data from 2001 to 2018 of commercial varieties that have been entered in the Kentucky trials. The data is listed

Table 6. Dry matter yields, seedling vigor and stand persistence of red clover varieties sown August 25, 2015, at Princeton, Kentucky.

Variety	Seedling Vigor ¹ Oct 23, 2015	Percent Stand							Yield (tons/acre)					3-year Total
		2015		2016		2017		2018		2016	2017	2018		
		Oct 23	Mar 22	Sep 23	Mar 16	Oct 25	Apr 5	Oct 11	Total	Total	May 24	Jul 3	Total	
Commercial Varieties-Available for Farm Use														
Freedom!	4.5	100	98	97	91	55	29	5	7.30	3.22	0.95	1.00	1.95	12.47*
SS-0303RCG	4.1	100	98	100	99	79	65	11	6.77	3.15	1.29	1.26	2.54	12.46*
Gallant	4.5	100	99	100	99	86	73	13	6.64	3.11	1.29	1.02	2.31	12.06*
Kenland	4.4	100	100	99	93	69	49	6	7.04	2.65	1.26	1.15	2.39	12.00*
Evolve	3.8	100	99	100	99	86	61	8	6.28	3.09	1.35	0.83	2.25	11.89*
Common O	5.0	100	100	97	92	44	15	1	6.78	2.60	0.76	0.78	1.54	10.92*
Experimental Varieties														
RC 0702	4.3	100	98	100	97	85	69	8	6.19	3.30	1.43	1.09	2.53	12.02*
DLFPS-TP-12	3.9	100	99	100	96	63	48	3	7.04	2.97	0.75	0.96	1.71	11.72*
UK2014(2,4-D)	3.6	100	99	96	83	49	13	4	6.89	1.88	0.73	0.65	1.39	10.15
GO-MOB	3.4	100	98	94	79	33	4	2	6.14	1.45	0.54	0.34	0.85	8.59
Mean	4.1	100	99	98	93	65	42	6	6.71	2.74	1.04	0.92	1.95	11.47
CV,%	13.0	0	1	3	5	32	37	81	11.33	21.30	17.31	33.74	22.99	12.42
LSD,0.05	0.8	0	2	4	7	30	23	7	1.10	0.85	0.26	0.47	0.69	2.18

¹ Vigor score based on a scale of 1 to 5 with 5 being the most vigorous growth.

*Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Table 7. Dry matter yields and stand persistence of white clover varieties sown April 6, 2016, at Lexington, Kentucky.

Variety	Percent Stand						Yield (tons/acre)								3-year Total
	2016		2017		2018		2016	2017	2018						
	Jun14	Sep27	Mar 27	Sep 29	Mar 20	Sep 25	Total	Total	May 22	Jun 19	Jul 12	Aug 17	Sep 21	Total	
Commercial Varieties-Available for Farm Use															
Will	97	94	92	90	66	76	1.03	2.64	0.60	0.64	0.50	0.33	0.36	2.43	6.10*
RegalGraze	98	89	87	79	38	50	1.10	2.29	0.50	0.44	0.25	0.28	0.31	1.79	5.17*
Bombus	91	88	89	86	61	65	0.63	2.11	0.66	0.56	0.25	0.29	0.32	2.07	4.82
Brianna	93	89	86	86	48	43	0.57	2.09	0.66	0.42	0.30	0.17	0.27	1.82	4.48
Patriot	85	81	89	86	68	63	0.56	2.07	0.63	0.30	0.33	0.22	0.27	1.74	4.37
Durana	89	91	96	93	88	83	0.67	1.76	0.72	0.34	0.30	0.27	0.23	1.86	4.29
Renovation	89	88	91	86	63	60	0.52	1.63	0.51	0.51	0.35	0.23	0.21	1.81	3.95
Alice	94	90	84	81	30	43	0.36	1.70	0.35	0.38	0.18	0.21	0.21	1.33	3.39
RIVENDEL	88	86	76	65	25	38	0.41	0.61	0.52	0.38	0.23	0.18	0.25	1.55	2.58
Experimental Varieties															
IS-TR12	93	88	93	88	44	61	0.57	2.44	0.50	0.50	0.33	0.25	0.23	1.81	4.82
Mean	92	88	88	84	53	58	0.64	1.93	0.57	0.45	0.30	0.24	0.27	1.82	4.40
CV,%	6	7	6	8	39	27	39.47	27.30	29.88	36.13	56.40	37.18	52.31	26.68	17.22
LSD,0.05	8	9	8	10	30	23	0.37	0.77	0.25	0.23	0.25	0.13	0.20	0.70	1.10

*Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

as a percentage of the mean of the commercial varieties entered in each specific trial. In other words, the mean for each trial is 100 percent—varieties with percentages over 100 yielded better than average, and varieties with percentages less than 100 yielded lower than average. Direct, statistical comparisons of varieties cannot be made using the summary Tables 12 and 13, but these comparisons do help to identify varieties for further

consideration. Varieties that have performed better than average over many years and at several locations have stable performance; others may have performed well in wet years or on particular soil types. These details may influence variety choice, and the information can be found in the yearly reports. See the footnotes in Tables 12 and 13 to determine which yearly report should be referenced.

Summary

Red and white clovers can be productive components of pasture and hayfields. Choose varieties with proven performance in yield and persistence.

The following College of Agriculture publications related to the establishment, management, and harvesting of clover are available at local county Extension

Table 8. Dry matter yields and stand persistence of white clover varieties sown April 5, 2017, at Lexington, Kentucky.

Variety	Percent Stand			Yield (tons/acre)							2-year Total
	2017	2018		2017	2018						
	Sep 29	Mar 20	Sep 25	Total	May 21	Jun 15	Jul 11	Aug 17	Sep 21	Total	
Commercial Varieties-Available for Farm Use											
RegalGraze	100	95	89	1.71	1.08	0.87	0.51	0.39	0.27	3.12	4.83*
Bombus	96	95	95	1.59	1.13	0.80	0.50	0.40	0.30	3.13	4.72*
Kakariki	98	96	95	1.63	1.22	0.72	0.51	0.32	0.22	2.99	4.62*
Will	100	98	96	1.43	1.11	0.78	0.43	0.35	0.26	2.93	4.37*
Brianna	96	96	90	1.40	1.05	0.86	0.40	0.27	0.32	2.90	4.30*
Alice	98	96	94	1.09	1.17	0.78	0.43	0.28	0.23	2.89	3.98*
Patriot	97	89	92	1.08	1.08	0.71	0.42	0.27	0.19	2.67	3.75
Durana	100	82	79	1.11	1.02	0.68	0.29	0.21	0.30	2.50	3.61
RIVENDEL	96	92	80	1.10	1.05	0.69	0.24	0.19	0.22	2.40	3.50
Experimental Varieties											
ISTR-12	98	98	97	1.64	1.25	0.92	0.40	0.25	0.20	3.02	4.66*
PPG-TR-101	98	85	73	1.58	1.20	0.67	0.23	0.23	0.23	2.57	4.15*
MVS-ROM	98	90	88	1.30	1.13	0.73	0.42	0.27	0.23	2.78	4.08*
NFWC04-29	100	90	84	1.35	1.09	0.56	0.35	0.23	0.13	2.36	3.71
Mean	98	92	89	1.39	1.12	0.75	0.40	0.28	0.24	2.79	4.18
CV,%	3	8	12	24.83	15.18	26.96	26.60	36.51	39.42	17.19	16.55
LSD,0.05	4	11	15	0.49	0.24	0.29	0.15	0.15	0.13	0.69	0.99

*Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Table 9. Dry matter yields, seedling vigor and stand persistence of white clover varieties sown April 12, 2018, at Lexington, Kentucky.

Variety	Seedling Vigor ¹ May 22, 2018	Percent Stand		Yield (tons/acre)			
		2018		2018			
		May 22	Sep 25	Jul 11	Aug 17	Sep 14	Total
Commercial Varieties-Available for Farm Use							
Patriot	2.0	79	100	0.86	0.82	0.35	2.03*
Will	3.5	94	100	0.80	0.81	0.39	2.01*
RegalGraze	4.3	98	100	0.72	0.96	0.32	2.00*
Alice	3.3	94	100	0.73	0.58	0.28	1.59*
Durana	2.0	81	100	0.64	0.53	0.22	1.38
Experimental Varieties							
B-17.7032	4.3	99	100	0.78	0.83	0.39	2.00*
Mean	3.2	91	100	0.76	0.76	0.32	1.84
CV,%	13.4	10	0	25.84	21.21	38.57	16.95
LSD,0.05	0.7	14	0	0.29	0.24	0.19	0.47

¹ Vigor score based on a scale of 1 to 5 with 5 being the most vigorous growth.

*Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

offices and are listed in the “Publications” section of the UK Forage website, forages.ca.uky.edu:

- Lime and Fertilizer Recommendations (AGR-1)
- Producing Red Clover Seed in Kentucky (AGR-2)
- Grain and Forage Crop Guide for Kentucky (AGR-18)
- Renovating Hay and Pasture Fields (AGR-26)
- Growing Red Clover in Kentucky (AGR-33)
- Establishing Forage Crops (AGR-64)
- Inoculation of Forage Legumes (AGR-90)
- Growing White Clover in Kentucky (AGR-93)
- Weed Control Strategies for Alfalfa and Other Forage Legume Crops (AGR-148)
- Insect Management Recommendations for Field Crops and Livestock (ENT-17)
- Managing Legume-Induced Bloat in Cattle (ID-186)
- Kentucky Plant Disease Management Guide for Forage Legumes (PPA-10D)
- “Emergency” Inoculation for Poorly Nodulated Legumes (PPFS-AG-F-04)

About the Authors

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Table 10. Performance of red clover varieties across years and locations in Kentucky.

Variety	Proprietor/ KY Distributor	Lexington					Princeton		
		2016 ¹			2017	2018	2015		
		16 ²	17	18	18	18	16	17	18
Commercial Varieties-Available for Farm Use									
Bearcat	Brett Young Seeds	*	x ³	*					
Common O	Public	x	x	x	x	x	*	*	x
Evolve	DLF Pickseed	x	x	x	*		*	*	*
Freedom!	Barenbrug USA	x	x	*	*	x	*	*	*
Freedom! MR	Barenbrug USA					*			
FF 9615	LaCrosse Seed	x	x	x	*				
Gallant	Turner Seed				*	*	*	*	*
Kenland (certified)	KY Agric. Exp. Station	*	x	*	*	*	*	*	*
Kenland (uncertified)	Public	x	x	x					
Robust	Blue Moon Farms				x				
SS-0303RCG	Southern States	*	*	*	*	*	*	*	*
Experimental Varieties									
B-15.3167	Blue Moon Farms	x	x	x	*				
B-16.0003	Blue Moon Farms	x	x	x	*				
B-16.4532	Blue Moon Farms				x				
B-16.5140	Blue Moon Farms				*				
DLFPS-TP-12	DLF Pickseed	*	x	x	*		*	*	*
GA 9908	Univ. of GA	*	x	x	x				
GATP1401	Univ. of GA				*				
GATP1402	Univ. of GA				x				
GATP1403	Univ. of GA				*				
GATP1412	Univ. of GA	*	*	*					
GATP1413	Univ. of GA	x	x	x					
GATP1501	Univ. of GA	x	x	x					
GATPCP	Univ. of GA				*				
GO-MOB	Grassland Oregon						x	x	x
UK2014(2,4-D)	KY Agric. Exp. Station	*	x	*	*	x	*	x	x
MVS-ROZ	Mountain View Seeds				x				
PAG-37	Preferred Alfalfa Genetics					*			
Pramedi	Hood River Seed	x	x	x					
RC 0702	DLF Pickseed	x	*	*	*		x	*	*
RC 0705G	Hood River Seed				*				

¹ Establishment year

² Harvest year

³ x in the box indicates the variety was in the test but yielded significantly less than the top variety in the test. Open boxes indicate the variety was not in the test.

* Not significantly different from the top-ranked red clover variety in the test.

Table 11. Performance of white clover varieties across years at Lexington, Kentucky.

Variety	Type	Proprietor/KY Distributor	2016 ¹			2017	
			16 ²	17	18	17	18
			Commercial Varieties-Available for Farm Use				
Alice	Intermediate	Barenbrug	x ³	x	x	x	*
Bombus	Ladino	Hood River Seed	x	*	*	*	*
Brianna	Ladino	DLF Pickseed	x	*	*	*	*
Durana	Intermediate	Pennington	x	x	*	x	*
Kakariki	Ladino	Luisetti Seeds				*	*
Patriot	Intermediate	Pennington	x	*	*	x	*
RegalGraz	Ladino	Cal/West Seed	*	*	*	*	*
Renovation	Intermediate	Smith Seed	x	x	*		
RIVENDEL	–	DLF Pickseed	x	x	x	x	x
Will	Ladino	Allied Seed, L.L.C.	*	*	*	*	*
Experimental Varieties							
IS-TR-12	Ladino	DLF Pickseed	x	*	*	*	*
MVS_ROM	–	Mountain View Seeds				*	*
NFWC04-29	Intermediate	Mountain View Seed				*	*
PPG-TR-101	–	Mountain View Seed				*	*

¹ Establishment year

² Harvest year

³ x in the box indicates the variety was in the test but yielded significantly less than the top variety in the test. Open boxes indicate the variety was not in the test.

* Not significantly different from the top-ranked white clover variety in the test.

